



SEQUENCE LISTING

<110> Luche, Ralf M.
Wei, Bo

<120> DSP-4 DUAL-SPECIFICITY PHOSPHATASE

<130> 200125.410

<140> US 09/544,517

<141> 2000-04-06

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1087

<212> DNA

<213> Homo sapien

<400> 1

acattgcatc cctgggataa acggacctgg acaactcact ctcttggtct gtggctgctg 60
cggttacctg gatgggagaa cacctctgag gctggctttg ttacctgggc aataagggac 120
tagcagttca gccgttttct atgcctgctg gatttgtttg tatttgttcc cagccactgc 180
tcatgtaatg tactccctta accaggaaat taaagcattc tcccggaata atctcaggaa 240
gcaatgcacc aggttgacaa cgctaactgg aaagaaaatt atagaaacat ggaaagatgc 300
cagaattcat gttgtggaag aagtagagcc gagcagtggg ggtggttggt gttatgtgca 360
ggaccttagc tcggacctgc aagttggcgt tattaagcca tggttgctcc tagggtcaca 420
agatgctgct catgatttgg atacctgaa aaagaataag gtgactcata ttcttaattg 480
tgcatatgga gttgaaaatg ctttcctcag tgactttaca tataagagca tttctatatt 540
ggatctgcct gaaaccaaca tcctgtctta tttccagaa tgtttgaaat ttattgaaga 600
agcaaaaaga aaagatggag tggttcttgt tcattgtaat gcaggcgttt ccagggctgc 660
tgcaattgta ataggtttcc tgatgaattc tgaacaaacc tcatttacca gtgctttttc 720
tttggtgaaa aatgcaagac cttccatatg tccaaattct ggcttcattg agcagcttcg 780
tacatatcaa gagggcaaag aaagcaataa gtgtgacaga atacaggaga acagtccatg 840
agttgcattg tagcagacaa tggacaactg tagtttctga attgacttct atagccatct 900
tttccctttt ttggagagta gactagcaaa actccctttt ttctcttgcc ttttttatgc 960
ataaatggag gtcaatctga ttgtcctgac ctactgtata agtaaatttc aaatgtcatt 1020
actttctctt tgttattata atgtgtgatt aaatgctttt tttaaattgct aagggaataa 1080
aaaaaaaa

<210> 2

<211> 217

<212> PRT

<213> Homo sapien

<400> 2

Met Tyr Ser Leu Asn Gln Glu Ile Lys Ala Phe Ser Arg Asn Asn Leu
1 5 10 15
Arg Lys Gln Cys Thr Arg Val Thr Thr Leu Thr Gly Lys Lys Ile Ile
20 25 30

52

X

a1

Glu Thr Trp Lys Asp Ala Arg Ile His Val Val Glu Glu Val Glu Pro
 35 40 45
 Ser Ser Gly Gly Gly Cys Gly Tyr Val Gln Asp Leu Ser Ser Asp Leu
 50 55 60
 Gln Val Gly Val Ile Lys Pro Trp Leu Leu Leu Gly Ser Gln Asp Ala
 65 70 75 80
 Ala His Asp Leu Asp Thr Leu Lys Lys Asn Lys Val Thr His Ile Leu
 85 90 95
 Asn Val Ala Tyr Gly Val Glu Asn Ala Phe Leu Ser Asp Phe Thr Tyr
 100 105 110
 Lys Ser Ile Ser Ile Leu Asp Leu Pro Glu Thr Asn Ile Leu Ser Tyr
 115 120 125
 Phe Pro Glu Cys Phe Glu Phe Ile Glu Glu Ala Lys Arg Lys Asp Gly
 130 135 140
 Val Val Leu Val His Cys Asn Ala Gly Val Ser Arg Ala Ala Ala Ile
 145 150 155 160
 Val Ile Gly Phe Leu Met Asn Ser Glu Gln Thr Ser Phe Thr Ser Ala
 165 170 175
 Phe Ser Leu Val Lys Asn Ala Arg Pro Ser Ile Cys Pro Asn Ser Gly
 180 185 190
 Phe Met Glu Gln Leu Arg Thr Tyr Gln Glu Gly Lys Glu Ser Asn Lys
 195 200 205
 Cys Asp Arg Ile Gln Glu Asn Ser Ser
 210 215

<210> 3
 <211> 14
 <212> PRT
 <213> Homo sapien

<400> 3
 Val His Cys Asn Ala Gly Val Ser Arg Ala Ala Ala Ile Val
 1 5 10

<210> 4
 <211> 23
 <212> PRT
 <213> Homo sapien

<400> 4
 Gly Arg Val Leu Val His Cys Gln Ala Gly Ile Ser Arg Ser Gly Thr
 1 5 10 15
 Asn Ile Leu Ala Tyr Leu Met
 20

<210> 5
 <211> 27
 <212> DNA
 <213> Homo sapien

<400> 5
 gcataaaaaa ggcaagagaa aaaaggg

<210> 6

53

A

Q1

<211> 24
<212> DNA
<213> Homo sapien

<400> 6
cacacttatt gctttctttg ccct

24

<210> 7
<211> 25
<212> DNA
<213> Homo sapien

<400> 7
gcactggtaa atgaggtttg ttcag

25

<210> 8
<211> 18
<212> DNA
<213> Homo sapien

<400> 8
agccctggaa acgctgc

18

<210> 9
<211> 25
<212> DNA
<213> Homo sapien

<400> 9
ctgaacaaac ctcatttacc agtgc

25

<210> 10
<211> 18
<212> DNA
<213> Homo sapien

<400> 10
gcaggcgttt ccagggct

18

<210> 11
<211> 25
<212> DNA
<213> Homo sapien

<400> 11
gagggcaaag aaagcaataa gtgtg

25

<210> 12
<211> 27
<212> DNA
<213> Homo sapien

<400> 12
gtcacactta ttgctttctt tgccctc

27

54

A

<210> 13
 <211> 20
 <212> DNA
 <213> Homo sapien

<400> 13
 gcaggcggttt ccagggctgc

20

<210> 14
 <211> 170
 <212> PRT
 <213> Homo sapien

<400> 14
 Ser Asp Leu Asp Arg Asp Pro Asn Ser Ala Thr Asp Ser Asp Gly Ser
 1 5 10 15
 Pro Leu Ser Asn Ser Gln Pro Ser Phe Pro Val Glu Ile Leu Pro Phe
 20 25 30
 Leu Tyr Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Glu
 35 40 45
 Glu Phe Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn
 50 55 60
 Leu Phe Glu Asn Ala Gly Glu Phe Lys Tyr Lys Gln Ile Pro Ile Ser
 65 70 75 80
 Asp His Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser
 85 90 95
 Phe Ile Asp Glu Ala Arg Gly Lys Asn Cys Gly Val Leu Val His Cys
 100 105 110
 Leu Ala Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met
 115 120 125
 Gln Lys Leu Asn Leu Ser Met Asn Asp Ala Tyr Asp Ile Val Lys Met
 130 135 140
 Lys Lys Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu
 145 150 155 160
 Asp Phe Glu Arg Thr Leu Gly Leu Ser Ser
 165 170

<210> 15
 <211> 168
 <212> PRT
 <213> Homo sapien

<400> 15
 Asp Arg Glu Leu Pro Ser Ser Ala Thr Glu Ser Asp Gly Ser Pro Val
 1 5 10 15
 Pro Ser Ser Gln Pro Ala Phe Pro Val Gln Ile Leu Pro Tyr Leu Tyr
 20 25 30
 Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Gly Lys Tyr
 35 40 45
 Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn Ala Phe
 50 55 60
 Glu His Gly Gly Glu Phe Thr Tyr Lys Gln Ile Pro Ile Ser Asp His
 65 70 75 80

55

A

a, Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser Phe Ile
 85 90 95
 Asp Glu Ala Arg Ser Lys Lys Cys Gly Val Leu Val His Cys Leu Ala
 100 105 110
 Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met Gln Lys
 115 120 125
 Met Asn Leu Ser Leu Asn Asp Ala Tyr Asp Phe Val Lys Arg Lys Lys
 130 135 140
 Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu Asp Phe
 145 150 155 160
 Glu Arg Thr Leu Gly Leu Ser Ser
 165

<210> 16
 <211> 170
 <212> PRT
 <213> Homo sapien

<400> 16
 Gly Leu Cys Glu Gly Lys Pro Ala Ala Leu Leu Pro Met Ser Leu Ser
 1 5 10 15
 Gln Pro Cys Leu Pro Val Pro Ser Val Gly Leu Thr Arg Ile Leu Pro
 20 25 30
 His Leu Tyr Leu Gly Ser Gln Lys Asp Val Leu Asn Lys Asp Leu Met
 35 40 45
 Thr Gln Asn Gly Ile Ser Tyr Val Leu Asn Ala Ser Asn Ser Cys Pro
 50 55 60
 Lys Pro Asp Phe Ile Cys Glu Ser Arg Phe Met Arg Val Pro Ile Asn
 65 70 75 80
 Asp Asn Tyr Cys Glu Lys Leu Leu Pro Trp Leu Asp Lys Ser Ile Glu
 85 90 95
 Phe Ile Asp Lys Ala Lys Leu Ser Ser Cys Gln Val Ile Val His Cys
 100 105 110
 Leu Ala Gly Ile Ser Arg Ser Ala Thr Ile Ala Ile Ala Tyr Ile Met
 115 120 125
 Lys Thr Met Gly Met Ser Ser Asp Asp Ala Tyr Arg Phe Val Lys Asp
 130 135 140
 Arg Arg Pro Ser Ile Ser Pro Asn Phe Asn Phe Leu Gly Gln Leu Leu
 145 150 155 160
 Glu Tyr Glu Arg Thr Leu Lys Leu Leu Ala
 165 170

<210> 17
 <211> 168
 <212> PRT
 <213> Homo sapien

<400> 17
 Pro Ala Gln Ala Leu Pro Pro Ala Gly Ala Glu Asn Ser Asn Ser Asp
 1 5 10 15
 Pro Arg Val Pro Ile Tyr Asp Gln Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Tyr Leu Tyr Leu Gly Ser Cys Asn His Ser Ser Asp Leu Gln Gly Leu
 35 40 45

56

A

a1

Gln Ala Cys Gly Ile Thr Ala Val Leu Asn Val Ser Ala Ser Cys Pro
 50 55 60
 Asn His Phe Glu Gly Leu Phe His Tyr Lys Ser Ile Pro Val Glu Asp
 65 70 75 80
 Asn Gln Met Val Glu Ile Ser Ala Trp Phe Gln Glu Ala Ile Ser Phe
 85 90 95
 Ile Asp Ser Val Lys Asn Ser Gly Gly Arg Val Leu Val His Cys Gln
 100 105 110
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Ile Gln
 115 120 125
 Ser His Arg Val Arg Leu Asp Glu Ala Phe Asp Phe Val Lys Gln Arg
 130 135 140
 Arg Gly Val Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Leu Glu Thr Gln Val Leu Cys His
 165

<210> 18
 <211> 169
 <212> PRT
 <213> Homo sapien

<400> 18
 Pro Leu Ser Thr Ser Val Pro Asp Ser Ala Glu Ser Gly Cys Ser Ser
 1 5 10 15
 Cys Ser Thr Pro Leu Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Arg Lys Asp Met Leu
 35 40 45
 Asp Ala Leu Gly Ile Thr Ala Leu Ile Asn Val Ser Ala Asn Cys Pro
 50 55 60
 Asn His Phe Glu Gly His Tyr Gln Tyr Lys Ser Ile Pro Val Glu Asp
 65 70 75 80
 Asn His Lys Ala Asp Ile Ser Ser Trp Phe Asn Glu Ala Ile Asp Phe
 85 90 95
 Ile Asp Ser Ile Lys Asn Ala Gly Gly Arg Val Phe Val His Cys Gln
 100 105 110
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Arg
 115 120 125
 Thr Asn Arg Val Lys Leu Asp Glu Ala Phe Glu Phe Val Lys Gln Arg
 130 135 140
 Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Phe Glu Ser Gln Val Leu Ala Pro His
 165

<210> 19
 <211> 169
 <212> PRT
 <213> Homo sapien

<400> 19
 Pro Val Pro Pro Ser Ala Thr Glu Pro Leu Asp Leu Gly Cys Ser Ser
 1 5 10 15

57

A

a1

Cys Gly Thr Pro Leu His Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ala Arg Arg Asp Met Leu
 35 40 45
 Asp Ala Leu Gly Ile Thr Ala Leu Leu Asn Val Ser Ser Asp Cys Pro
 50 55 60
 Asn His Phe Glu Gly His Tyr Gln Tyr Lys Cys Ile Pro Val Glu Asp
 65 70 75 80
 Asn His Lys Ala Asp Ile Ser Ser Trp Phe Met Glu Ala Ile Glu Tyr
 85 90 95
 Ile Asp Ala Val Lys Asp Cys Arg Gly Arg Val Leu Val His Cys Gln
 100 105 110
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Met
 115 120 125
 Lys Lys Arg Val Arg Leu Glu Glu Ala Phe Glu Phe Val Lys Gln Arg
 130 135 140
 Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Phe Glu Ser Gln Val Leu Ala Thr Ser
 165

<210> 20
 <211> 171
 <212> PRT
 <213> Homo sapien

<400> 20
 Ser Glu Arg Ala Leu Ile Ser Gln Cys Gly Lys Pro Val Val Asn Val
 1 5 10 15
 Ser Tyr Arg Pro Ala Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Lys Cys Glu Phe Leu
 35 40 45
 Ala Asn Leu His Ile Thr Ala Leu Leu Asn Val Ser Arg Arg Thr Ser
 50 55 60
 Glu Ala Cys Met Thr His Leu His Tyr Lys Trp Ile Pro Val Glu Asp
 65 70 75 80
 Ser His Thr Ala Asp Ile Ser Ser His Phe Gln Glu Ala Ile Asp Phe
 85 90 95
 Ile Asp Cys Val Arg Glu Lys Gly Gly Lys Val Leu Val His Cys Glu
 100 105 110
 Ala Gly Ile Ser Arg Ser Pro Thr Ile Cys Met Ala Tyr Leu Met Lys
 115 120 125
 Thr Lys Gln Phe Arg Leu Lys Glu Ala Phe Asp Tyr Ile Lys Gln Arg
 130 135 140
 Arg Ser Met Val Ser Pro Asn Phe Gly Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Tyr Glu Ser Glu Ile Leu Pro Ser Thr Pro Asn
 165 170

<210> 21
 <211> 171
 <212> PRT
 <213> Homo sapien

58

A

G1
<400> 21

His	Val	Val	Glu	Glu	Val	Glu	Pro	Ser	Ser	Gly	Gly	Gly	Cys	Gly	Tyr
1				5					10					15	
Val	Gln	Asp	Leu	Ser	Ser	Asp	Leu	Gln	Val	Gly	Val	Ile	Lys	Pro	Trp
		20						25					30		
Leu	Leu	Leu	Gly	Ser	Gln	Asp	Ala	Ala	His	Asp	Leu	Asp	Thr	Leu	Lys
		35					40					45			
Lys	Asn	Lys	Val	Thr	His	Ile	Leu	Asn	Val	Ala	Tyr	Gly	Val	Glu	Asn
	50					55					60				
Ala	Phe	Leu	Ser	Asp	Phe	Thr	Tyr	Lys	Ser	Ile	Ser	Ile	Leu	Asp	Leu
65					70					75				80	
Pro	Glu	Thr	Asn	Ile	Leu	Ser	Tyr	Phe	Pro	Glu	Cys	Phe	Glu	Phe	Ile
			85						90					95	
Glu	Glu	Ala	Lys	Arg	Lys	Asp	Gly	Val	Val	Leu	Val	His	Cys	Asn	Ala
			100					105					110		
Gly	Val	Ser	Arg	Ala	Ala	Ala	Ile	Val	Ile	Gly	Phe	Leu	Met	Asn	Ser
		115					120					125			
Glu	Gln	Thr	Ser	Phe	Thr	Ser	Ala	Phe	Ser	Leu	Val	Lys	Asn	Ala	Arg
	130					135					140				
Pro	Ser	Ile	Cys	Pro	Asn	Ser	Gly	Phe	Met	Glu	Gln	Ile	Arg	Thr	Tyr
145					150					155					160
Gln	Glu	Gly	Lys	Glu	Ser	Asn	Lys	Cys	Asp	Arg					
				165					170						

59

A